

WHAT IS CLAIMED IS:

1. A video data conversion apparatus comprising:

a conversion unit configured to convert first digital video data that complies with MPEG and includes first aspect data with a first aspect ratio and second aspect data with a second aspect ratio, different from the first aspect ratio, into second digital video data having only the first aspect ratio by changing the second aspect data with the second aspect ratio into the first aspect data with the first aspect ratio without first converting the first digital video data into analog data; and

an output unit configured to output the second digital video data converted by the conversion unit.

2. An apparatus according to claim 1, wherein the first digital video data complies with a DVD-VR standard and the second digital video data complies with the DVD-VR standard.

3. An apparatus according to claim 2, wherein the first digital video data and the second digital video data each contain video object data obtained by encoding video and audio data, and management data, corresponding to the video object data, which is used to manage the video object data,

wherein the video object data contains a plurality of video object unit data, each video object unit data contains sequence header data, the sequence header data contains said first and second aspect data that designates said first and second aspect ratios respectively, and

wherein the conversion unit converts a first group of video object unit data having the second aspect data into a second group of video object unit

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data having the first aspect data by rewriting the second aspect data as said first aspect data.

4. An apparatus according to claim 3, wherein each second aspect data of the second digital video data is the same.

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5. An apparatus according to claim 3, wherein the video object unit data contains sequence display extension data, the sequence display extension data contains display horizontal size data and display vertical size data, and

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the conversion unit converts the first group of video object unit data having the second aspect data into the second group of video object unit data having the first aspect data by rewriting the display horizontal size data and the display vertical size data.

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6. An apparatus according to claim 1, wherein the conversion unit converts the second digital video data having the first aspect data into third digital video data complying with a DVD-Video standard.

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7. An apparatus according to claim 6, wherein the first digital video data and the second digital video data each contain video object data obtained by encoding video and audio data, and management data, corresponding to the video object data, which is used to manage the video object data,

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wherein the video object data contains a plurality of video object unit data, each video object unit data contains sequence header data, the sequence header data contains said first and second aspect data that designates said first and second aspect ratios respectively, and

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wherein the conversion unit converts a first group of video object unit data having the second aspect data into a second group of video object unit data having the first aspect data by rewriting the second aspect data as said first aspect data.

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8. An apparatus according to claim 7, wherein each aspect data of the second digital video data is the same.

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9. An apparatus according to claim 7, wherein the video object unit data contains sequence display extension data, the sequence display extension data contains display horizontal size data and display vertical size data, and

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the conversion unit converts the first group of video object data unit data having the second aspect data into the second group of video object unit data having the first aspect data by rewriting the display horizontal size data and the display vertical size data.

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10. A video data conversion method comprising:  
converting first digital video data that complies with an MPEG standard and includes first aspect data with a first aspect ratio and second aspect data with a second aspect ratio, different from the first aspect ratio, into second digital video data having only the first aspect data by changing the second aspect data into the first aspect data without converting the first digital video data into analog data.

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11. A method according to claim 10, wherein the first digital video data complies with a DVD-VR standard and the second digital video data

complies with the DVD-VR standard.

12. A method according to claim 11, wherein the first digital video data and the second digital video data each contain video object data obtained by encoding video and audio data, and management data,  
5 corresponding to the video object data, which is used to manage the video object data, and

wherein the video object data contains a plurality of video object unit data, each video object unit data contains sequence header data, the  
10 sequence header data contains aspect data that designates an aspect ratio, the method further comprising:

converting a first group of video object data unit data having the second aspect data into a second group of video object unit data having the first aspect data by rewriting the second aspect data as the first aspect data.  
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13. A method according to claim 12, wherein each aspect data of the second digital video data is the same.

14. A method according to claim 12, wherein the video object unit data contains sequence display extension data, and the sequence display extension data contains display horizontal size data and display vertical size data, the method further comprising:

converting the first group of video object unit data having the second aspect data into the second group of video object unit data having the first aspect data by rewriting the display horizontal size data and the display  
25 vertical size data.

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15. A method according to claim 10, further comprising converting the second digital video data having the first aspect data into third digital video data complying with a DVD-Video standard.

5           16. A method according to claim 15, wherein the first digital video data and the second digital video data each contain video object data obtained by encoding video and audio data, and management data, corresponding to the video object data, which is used to manage the video object data, and

10           wherein the video object data contains a plurality of video object unit data, each video object unit data contains sequence header data, the sequence header data contains aspect data that designates an aspect ratio, the method further comprising:

15           converting a first group of video object data unit data having the second aspect data into a second group of video object unit data having the first aspect data by rewriting the second aspect data as the first aspect data.

17. A method according to claim 16, wherein each second aspect data of the second digital video data is the same.

20           18. A method according to claim 16, wherein the video object unit data contains sequence display extension data, and the sequence display extension data contains display horizontal size data and display vertical size data, the method further comprising:

25           converting the first group of video object data unit data having the second aspect data into the second group of video object unit data having the first aspect data by rewriting the display horizontal size data and the display

vertical size data.

19. A method according to claim 10, further comprising receiving a designation of a desired aspect ratio, wherein the desired aspect ratio  
5 corresponds to the first aspect ratio.

20. A video data conversion apparatus comprising:  
a conversion unit configured to convert first video data which complies  
with a MPEG standard and has a plurality of different aspect ratios defined  
10 therein into second video data which complies with said MPEG standard and  
has a single aspect ratio defined therein by directly writing data corresponding  
to said plurality of aspect ratios within said first video data as a single aspect  
ratio to form said second video data without first converting said first video  
data into analog data; and  
15 output unit configured to output the second video data converted by  
the conversion unit.

21. An apparatus according to claim 20, wherein said MPEG standard  
for both the first and second digital video data comprises the DVD-VR  
20 standard.

22. An apparatus according to claim 21, wherein the first digital video  
data and the second digital video data each contain video object data  
obtained by encoding video and audio data, and management data,  
25 corresponding to the video object data, which is used to manage the video  
object data,  
wherein the video object data contains a plurality of video object unit

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data, each video object unit data contains sequence header data, the sequence header data contains first and second aspect data that designates said plurality of different aspect ratios and said single aspect ratio respectively, and

5            wherein the conversion unit converts a first group of video object unit data having the second aspect data into a second group of video object unit data having the first aspect data by rewriting the second aspect data as said first aspect data so that each second aspect data in the second group designates said single aspect ratio so as to form said second video data.

10            23. An apparatus according to claim 22, wherein the video object unit data contains sequence display extension data, the sequence display extension data contains display horizontal size data and display vertical size data, and

15            the conversion unit converts the first group of video object unit data having the second aspect data into the second group of video object unit data having the first aspect data by rewriting the display horizontal size data and the display vertical size data.

20            24. An apparatus according to claim 20, wherein subsequent to conversion of said first digital video data into said second digital video data, the conversion unit further converts the second digital video data having the single aspect ratio into third digital video data complying with a MPEG DVD-Video standard.

25            25. An apparatus according to claim 24, wherein the first digital video data and the second digital video data each contain video object data obtained by encoding video and audio data, and management data, corresponding to the video object data, which is used to manage the video

object data,

wherein the video object data contains a plurality of video object unit data, each video object unit data contains sequence header data, the sequence header data contains first and second aspect data that designates  
5 said plurality of different aspect ratios and said single aspect ratio respectively, and

wherein the conversion unit converts a first group of video object unit data having the second aspect data into a second group of video object unit data having the first aspect data by rewriting the second aspect data as said  
10 first aspect data so that each second aspect data in the second group designates said single aspect ratio so as to form said second video data.

26. An apparatus according to claim 24, wherein the video object unit data contains sequence display extension data, the sequence display  
15 extension data contains display horizontal size data and display vertical size data, and

the conversion unit converts the first group of video object unit data having the second aspect data into the second group of video object unit data having the first aspect data by rewriting the display horizontal size data and  
20 the display vertical size data.

27. An apparatus according to claim 24, wherein subsequent to conversion of said first digital video data into said second digital video data, the conversion unit further converts the second digital video data having the  
25 single aspect ratio into third digital video data complying with a MPEG DVD-Video standard.



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28. A method of video data conversion comprising the steps of :

converting first video data which complies with a MPEG standard and has a plurality of different aspect ratios defined therein into second video data which complies with said MPEG standard and has a single aspect ratio defined therein by directly writing data corresponding to said plurality of aspect ratios within said first video data as a single aspect ratio to form said second video data without first converting said first video data into analog data; and

outputting the second video data.

29. The method apparatus according to claim 28, wherein said MPEG standard for both the first and second digital video data comprises the DVD-VR standard.

30. An apparatus according to claim 29, wherein the first digital video data and the second digital video data each contain video object data obtained by encoding video and audio data, and management data, corresponding to the video object data, which is used to manage the video object data,

wherein the video object data contains a plurality of video object unit data, each video object unit data contains sequence header data, the sequence header data contains first and second aspect data that designates said plurality of different aspect ratios and said single aspect ratio respectively, and

wherein said converting step converts a first group of video object unit data having the second aspect data into a second group of video object unit data having the first aspect data by rewriting the second aspect data as said

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first aspect data so that each second aspect data in the second group designates said single aspect ratio so as to form said second video data.

31. An apparatus according to claim 30, wherein the video object unit  
5 data contains sequence display extension data, the sequence display extension data contains display horizontal size data and display vertical size data, and

said converting step further includes converting the first group of video  
10 object unit data having the second aspect data into the second group of video object unit data having the first aspect data by rewriting the display horizontal size data and the display vertical size data.

32. An apparatus according to claim 31, wherein subsequent to  
15 converting said first digital video data into said second digital video data, the method further comprises the step of converting the second digital video data having the single aspect ratio into third digital video data complying with a MPEG DVD-Video standard.

20 33. An apparatus according to claim 28, wherein subsequent to converting said first digital video data into said second digital video data, the method further comprises the step of converting the second digital video data having the single aspect ratio into third digital video data complying with a MPEG DVD-Video standard.